

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

**Date of Report: December 4, 1995**

**Date Received: November 28, 1995**

**Project: Metro Grab, PO #M71085**

**Date Samples Extracted: November 29, 1995**

**Date Extracts Analyzed: November 29, 1995**

**RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL AND ZINC**

**Samples Processed Using Method 3005**

**Results Reported as mg/L (ppm)**

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M71085	1.2	0.95	0.66	0.08
Method Blank	<0.05	<0.05	<0.05	<0.05

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Project: Metro Grab, PO #M71085

**QUALITY ASSURANCE RESULTS  
FOR CHROMIUM, COPPER, NICKEL AND ZINC  
Samples Processed Using Method 3005**

Laboratory Code: KJ64243DU

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	0.53	0.49	8	0-20
Copper	mg/L (ppm)	1.8	2.2	10	0-20
Nickel	mg/L (ppm)	5.0	4.1	20	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: KJ64243MS/KJ64243MD

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>% Recovery</u>		<u>Acceptance</u>	<u>Relative Percent Difference</u>
				<u>MS</u>	<u>MSD</u>	<u>Criteria</u>	
Chromium	mg/L (ppm)	5	0.53	93	93	80-120	0
Copper	mg/L (ppm)	5	1.8	119	112	80-120	6
Nickel	mg/L (ppm)	10	5.0	83	86	80-120	4
Zinc	mg/L (ppm)	5	<0.05	111	120	80-120	8

Laboratory Code: Spike Blank

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>% Recovery MS</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	5	91	80-120
Copper	mg/L (ppm)	5	111	80-120
Nickel	mg/L (ppm)	10	82	80-120
Zinc	mg/L (ppm)	5	106	80-120

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

KNJ A7  
11.28.95  
3:32

Send Report To: ALASKAN COPPER WORKS Contact Genet Thompson  
Company \_\_\_\_\_  
Address 625 HANCOCK ST  
City, State, Zip SEATTLE WA 98134  
Phone # (206) 382-8379 Date 11-28-95

[illegible]

FORMS/COC

AKC-0012506



**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Andrew John Friedman  
James E. Bruya, Ph.D.  
(206) 285-8282

3012 16th Avenue West  
Seattle, WA 98119-2029  
FAX: (206) 283-5044

December 4, 1995

Gerry Thompson, Project Leader  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

Dear Mr. Thompson:

Enclosed are the results from the testing of material submitted on November 28, 1995 from your Metro Grab, PO #M71085 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson  
Chemist

keh  
Enclosures  
FAX: 382-7335  
ACU1204R.DOC

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December 4, 1995

**INVOICE # 95ACU1204-1**  
**DUPLICATE COPY**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

RE: Project Metro Grab, PO #M71085: Results of testing requested by Gerry Thompson, Project Leader for material submitted on November 28, 1995.

1 process water sample analyzed for  
Chromium, Copper, Nickel, Zinc  
@ \$65 per sample

\$ 65.00

Amount Due .....

\$ 65.00